

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present response is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-13 and 23-29 and 31 are pending in this application. While no claims are amended hereby, Applicants have provided a listing of the claims purely for the convenience of the Examiner.

II. CLAIM REJECTIONS UNDER 35 U.S.C. §§102 & 103

Claims 23, 25-27 and 31 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,857,497 to Gaisser ("Gaisser") in view of WO 01/88261 to Strandqvist ("Strandqvist"). Claims 1-2, 4, 6-8, 13, 23, 25-27 and 31 are rejected under 35 U.S.C. §102(b) or, in the alternative, over 35 U.S.C. §103 over Strandqvist in view of Gaisser. Claims 1-2, 4, 6-8, 13, 23, 25-27, and 31 are also rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,142,752 to Greenway in view of Gaisser. Finally, claims 23 and 25-27 and 31 are rejected under 35 USC § 103(a) over U.S. Patent No. 5,883,022 to Elsener ("Elsener") in view of any one of U.S. Patent No. 3,884,630 to Schwartz ("Schwartz") or U.S. Patent No. 4,104,814 to Whight ("Whight"). Applicant traverses and respectfully requests reconsideration and withdrawal of the rejections.

Claim 1 recites: "A hydroentangling apparatus for the production of a hydroentangled nonwoven product, the improvement comprising: a hydroentangling support fabric comprising

flat filaments, wherein said support fabric.... Claim 23 recites, *inter alia*: “A hydroentangling support fabric in a hydroentangling apparatus for the production of a hydroentangled nonwoven product, the improvement comprising flat filaments.” The Office Action admits that Gassier does not disclose a hydroentangling fabric or device. Instead the Office Action alleges the recitation is an intended use, and that Gaisser’s fabric is capable of being used in hydroentangling.

Turning to the rejections on the merits, claims 23, 25-27 and 31 are rejected under 35 U.S.C. §102(b) over Gaisser in view of Strandqvist. Claims 1-2, 4, 6-8, 13, 23, 25-27 and 31 are rejected under 35 U.S.C. §102(b) or, in the alternative, over 35 U.S.C. §103 over Strandqvist in view of Gaisser.

Applicant’s prior responses presented arguments as to the structural differences between Gaisser’s papermaking dryer fabric and a hydroentangling support fabric. To review, hydroentangling and papermaking processes and devices have wholly different needs. For a non-limiting example that highlights such difference, paragraph 31 of the publication of the Specification (hereafter the Specification) states:

The fabrics of the invention may be formed as single, double or triple layer weaves.... In such embodiment, the fibers of the nonwoven are supported by the round monofilaments of the forming side while the flat monofilaments promote **greater reflective water flow**, and therefore **greater reflective entanglement energy**, the fabric **promotes greater entanglement of the fibers making up the nonwoven, and thereby provides for a stronger finished nonwoven**. That is, when water is directed at the fabric in a direction perpendicular, or substantially perpendicular to the plane in which the flattened yarns lie, some

water will pass through the forming surface layer and intermediate layer, reflect off the wearside layer, and further entangle the fibers. (Emphasis added)

Thus the design of the hydroentangling fabric requires, inter alia, permeability at the forming site surface and the intermediate layer, and yet must **reflect** at the wearside layer. Moreover, the fabric must be designed to provide the appropriate reflective water flow to effect entanglement.

Gassier, on the other hand explains how its papermaking fabrics must have different structural qualities. At col. 3, lines 16-19, Gassier states:

A fabric having increased fabric stability in the machine direction is provided yet having **a high degree of openness and permeability** in a range **greater than thirty percent** of the total fabric area.

And at col 4, lines 26-28:

The drying process is outwardly from the heated cylinders through the paper web and through the dryer fabric. Thus **sufficient permeability must be had in order to facilitate drying of the fabric.**

And at Col. 6, lines 8-11:

Increased structural stability is provided in the machine direction **without decrease in the permeability or open area** of the fabric.

And at Col. 1, lines 30-36:

For drying purposes, the carrier fabric must have a high degree of openness and air permeability so that sufficient air is delivered through the base fabric and the embossed layer, which is also permeable for drying. Carrier fabric must have sufficient load bearing capability for bearing the loads in the machine direction which are the most severe.

Thus, it is clear that Gassier's highly permeable papermaking fabric is in no way designed for hydroentangling. In particular, increasing the surface area is contrary to the need for permeability, and there is no need for reflectivity in a dryer fabric.

At page 3, the Office Action again cites Strandqvist as evidence that Gassier's dryer fabric is "inherently capable" of use as a hydroentangling support fabric. However an ordinarily skilled artisan would understand, consistent with the showing above, that Strandqvist shows they cannot. Page 4, lines 7-11 of Strandqvist, cited by the Office Action, states:

The supporting member 12 which supports the fibre web during the hydroentanglement is constituted of a moulded, close-meshed plastic screen, for example the type disclosed in WO 92/1763 or in WO 98/35742, and which according to these documents is utilized as a *base material* for a *press felt* of a paper machine.

Emphasis added. Thus Strandqvist's support member is used as a base material for a press felt on a papermaking machine. As amply explained in the prior responses, Gassier is a *dryer fabric* for a papermaking machine, *not a press felt*. Press felts and dryer fabrics are not interchangeable fabrics on papermaking machines. Thus the teachings of Strandqvist do not say anything about Gassier's fabric, and hence, do not show any inherent qualities of Gassier's fabric. Thus the Office Action's argument fails as inherency cannot rely on mere possibilities.

In response to these arguments, the Office Action at page 11 alleges that the argument is not persuasive because Gaisser's fabric is "similarly shaped." The Office Action also refers to Gaisser's "pressing function" at column 4, lines 21-29 of Gaisser. However, the pressing referred to is not that of the press section of a papermaking machine, which is what press felts are designed for. Gaisser states: "By contacting the paper web W, the dryer fabrics press and maintain the web in an intimate heat transfer relationship with the dryer cylinders whereby the cylinders remove water or other fluids from the web." *Id.* Thus the pressing action the Office Action refers to is pressing to create and maintain contact with a heated dryer cylinder where the heat dries the web, but not to press water from a web. (See the definition of "Press," v., used with object, at dictionary.com: 2 to move by weight or force in a certain direction or into a certain position: *The crowd pressed him into a corner.*) In contrast, in a press section and press fabric are designed to allow water to be **pressed from a web** and into the fabric without rewet, which is a wholly different function, as well as a wholly different use of the term press, even in common parlance. (See the definition of "Press," v., used with object, at dictionary.com: 8 to squeeze out or express, as juice: *to press the juice from grapes.*)

Indeed, Gaisser itself teaches away from using dryer fabrics as press felts. On press felts, Gaisser states at column 2, lines 23-29: "These **press felt base fabrics** are preferably woven endless. Due **to quite different objectives in designing these fabrics**, none of the designs show a structurally stable weave pattern and a projected open area in the range of thirty percent or more as in the case of the present invention." Emphasis added.

Thus not only are Gaisser's dryer fabrics too different from press felts to ascribe any inherency on papermaking machines – much less for hydroentangling – but Gassier expressly teaches away from such a combination even within the context of papermaking.

For these reasons, the rejections on Gassier alone or Strandqvist in view of Gaiser fails under §§ 102, 103. Applicants thus respectfully request reconsideration and withdrawal of the rejections.

Claims 1-2, 4, 6-8, 13, 23, 25-27, and 31 are rejected under 35 U.S.C. § 103(a) over Greenway in view of Gassier. As shown in prior responses and above, Gassier's dryer fabric is not a hydroentangling fabric.

Moreover, Greenway clearly discloses the use of round wires. Thus again, a person of ordinary skill in the art would not be motivated to combine the teachings of Gassier with that of Greenway merely because Greenway discloses a hydroentangling 'module.'

Also, Table I disclosed in col. 5, lines 45-60 of Greenway and cited by the Office Action, shows the following specifications for its forming screen:

TABLE I		
Forming Screen Specifications		
Property	36 × 29 flat	16 × 14 flat
Warp wire - Polyester	.0157	.032
Round		
Shute wire - Polyester	.0157	.035
Round		
Weave type	plain mesh	plain mesh
Open area	23.7%	24.9%
Plane difference	—	.008" ± .003
Snag	light	none ± light
Weave tightness (slay)	no angular displacement	no angular displacement
Edges	filled ½" each side	filled ½" each side
Seam	invisible/endless	invisible/endless

Greenway also discloses that entangling member 44 in FIG. 4A, which is a 36x29 mesh weave having a 24% void area, is fabricated of polyester warp and shute round wire. (Greenway -- col. 5, lines 14-17). Therefore, Greenway discloses the use of round wires for its forming screen

and there is no reason for one skilled in the art to modify the forming wire of Greenway when there is clearly no reason in Greenway to use wires of other shapes.

Moreover, throughout Gaisser, the reference states that the weave should be at least 30% open, which is why the increased stability is needed. ("A fabric having increased fabric stability in the machine direction is provided yet having a high degree of openness and permeability in a range greater than thirty percent of the total fabric area. *Gassier*, Column 3, lines 16-19). As shown throughout prosecution, this higher degree of openness is needed in dryer fabrics. Greenway, on the other hand, has weaves of less than 30%, and thus (1) Gaisser teaches they are not desirable as a dryer fabric and (2) the need for increased stability in Gaisser due to that higher degree of openness is not an issue in Greenway.

Finally, as explained and evidenced above, hydroentangling fabrics demand permeability at the forming site surface and the intermediate layer, and yet must **reflect** with the reflective entanglement energy at the wearside layer for the purpose of entangling fibers of a nonwoven product. See paragraph 31 of the specification. Gaisser, on the other hand, requires a high degree of openness to permit heat transfer from a paper web from a papermaking machine. In view of this and the contrary teachings of Gaisser, there is no "support fabric art" that readily admits of substituting the structures from the design of a dryer fabric in a papermaking machine and a forming fabric in a hydroentangling apparatus, or regarding them as "known equivalents." Accordingly, Gassier does not anticipate or render obvious independent claim 23, and nothing in Strandqvist cures this deficiency. As all the pending claims ultimately depend from independent claim 23, and as nothing in Gassier cures its deficiency as applied to the independent claims, Applicants submit that all the claims are in condition for allowance and urging reconsideration and withdrawal of the rejections thereto.

Claims 23, 25-27 and 31 were rejected under 35 USC § 103 (a) over U.S. Patent No. 5,883,022 to Elsener (hereinafter merely "Elsener") in view of any one of U.S. Patent No. 3,884,630 to Schwartz (hereinafter merely "Schwartz") or U.S. Patent No. 4,104,814 to Whight (hereinafter merely "Whight"). Applicants traverse and respectfully request reconsideration and withdrawal of the rejections.

As understood by the Applicants, Elsener is a textile fabric for use in clinical areas or clean rooms. The towel is for drying hands and skin. Specifically, Elsener discloses an absorbent fabric material of synthetic endless fibers, in particular for use in clinical areas and also clean room areas and also in company and public washrooms (Elsener -- Abstract). Therefore, Elsener has absolutely nothing to do with endless or continuous industrial process fabrics whatsoever.

As understood by the Applicants, Schwartz relates to a towel apparatus which handles an endless towel within a cabinet and subjects the same to cleaning and drying making use of a low vapor pressure chemical type solvent. (Schwartz -- Abstract)

As understood by the Applicants, Whight relates to a clean towel presenting machine, which includes an endless web of liquid absorbent material contained in a casing to discontinuously present a clean portion and simultaneously retract an essentially equal used portion through an intake slot, a cleaning liquid tank and a heater to dry and sterilize the web. (Whight -- Abstract).

In view of the extensive discussions of hydroentangling fabrics above and in prior responses, it almost goes without saying that an ordinarily skilled artisan would not look to hand towels for teachings on industrial process belts.

The Office Action regards hydroentangling as "an intended use," and thereby argues that Elsener's, Schwartz's, and Whight's towels can be used as a hydroentangling fabric. Applicants

refer to Exhibits A-C, submitted in the Amendment and Response dated April 3, 2009, which discuss, in general, the type of fabrics used in a hydroentangling process. Applicants refer in particular to, for example the photographs of Figures 5-8 of Exhibit A (showing magnified photographs of 10 – 100 mesh forming belts at 50 g/m² and 100 g/m² webs) and Figures 2a to 2c of Exhibit B (showing spunlace support wire). The Exhibits show that Elsener's, Schwartz's, and Whight's hand drying towels are not hydroentangling support fabrics and such towels could in no way be used a hydroentangling fabric.

Applicants respectfully submit that none of these references teach or suggest a hydroentangling support fabric in a hydroentangling apparatus for the production of a hydroentangled nonwoven product, as recited in the instant claims. Thus nothing in Elsener, Schwartz, or Whight discloses or otherwise renders obvious each of the limitations of the independent claims. Dependent claims 2, 4, 6-8, 13 and 25-27 depend from either claim 1 or claim 23 discussed above, and are therefore patentable for similar reasons.

As nothing in the art of record cures this deficiency, Applicants propose urging all the claims are in condition for allowance.

CONCLUSION

In view of the foregoing amendments and remarks, all of the claims in this application are patentable over the prior art, and early and favorable consideration thereof is solicited.

In the event that the Examiner disagrees with any of the foregoing comments concerning the disclosures in the cited prior art, it is requested that the Examiner indicate where in the reference, there is the basis for a contrary view.

Please charge any fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

If any issues remain, or if the Examiner has any further suggestions, the Examiner is invited to call the undersigned at the telephone number provided below. The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,
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